Siemens Life

Audiologist and Hearing Care Professional Information

www.siemens.com/hearing

SIEMENS

So sophisticated. So discreet. So smart.

Siemens Life is designed for people who live with style – and want their hearing instruments to fit right in. Life is a small, beautifully designed BTE that comes in 16 colors, giving style-conscious wearers plenty of options to choose from. But Life is not just another pretty face. It's smart, too. It delivers incredible performance in an open fitting. And it's even compatible with Tek™, our new wireless enhancement system.

Suave
Truly sophisticated, its sharp combination of black and olive appeals to people who like a clean, modern look.

Chic

Fresh

Mod

Suave

Charming

Berry Charming

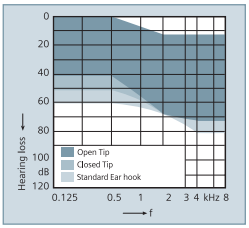
Exclusive Life colors and patterns

Life is available in 6 fashion colors, as well as a complete range of skin and hair tones (see page 24). You can easily exchange the housing in one office visit for wearers who want more than one color option.

Easy to wear.

Life is the perfect choice for first-time and experienced wearers alike. Its small size and elegant style make it easy to wear and hard to detect – so it's especially appealing to new wearers who are concerned about the look of traditional, bulky instruments. Plus, Life's comfortable, open fit design reduces or eliminates the bothersome occlusion effect. Extremely reliable, Life requires little maintenance thanks to its durable BTE configuration, ultrathin LifeTubes, and replaceable tips. Not to mention its fully automated technology. With Life, your customers will never have to adjust a thing. Including their style.

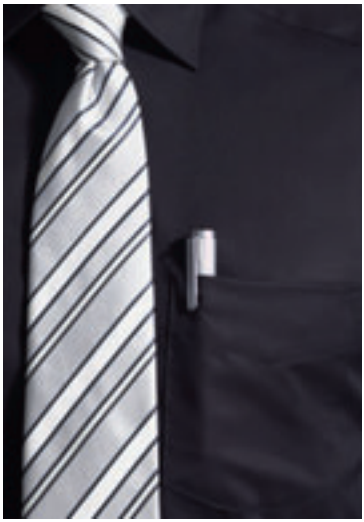
Fitting range



Easy to fit.

You can evaluate and fit wearers in the same day. Life is an instant fit for almost every ear. That means fewer time-consuming visits for customers and fewer hassles for you. Now just about anyone with a mild to moderate hearing loss can start enjoying better hearing right away. Because Life is available in three performance levels, it's also easy to fit every budget. Allowing you to match the right instrument with the right wearer – whether they're looking for the best possible technology or the best possible value.

Optional remote for easy adjustments. Although Life is fully automatic at every performance level, some people prefer more control. For them, we offer the sleek ePen™ remote control. It allows them to discreetly turn their instruments on and off, change programs, and control volume. For people who prefer a more traditional remote control with larger buttons, the ProPocket™ remote is also available.



What's inside.

Natural Sound

- SoundBrilliance™
- TruEar™
- SoundBalance (only available with Tek)
- e2e wireless™ 2.0
- AGC-I Compression System (channels)
- AGC-O Output limitation (channels/programming handles)

Sound Comfort

- Speech and Noise Management
- SoundSmoothing™
- Microphone Noise Reduction
- eWindscreen™
- Directional Microphone
- FeedbackBlocker™
- Adaptive Melody Beeps

Learning/Logging

- SoundLearning™
- DataLearning
- Data Logging

Wireless Connectivity

- TEK

Instrument Controls

- Number of Programs
- ePen
- ProPocket

Wireless Programming

- ConnexxLink™*

* available at the end of 2009

Life 700	Life 500	Life 300
●		
●		
●	●	●
●	●	●
16	12	8
16/4	12/4	8/1
on/off + 7 steps	on/off + 5 steps	on/off + 3 steps
on/off + 3 steps	on/off + 3 steps	on/off
●	●	●
●	●	●
automatic multi-channel adaptive	automatic multi-channel adaptive	automatic adaptive
●	●	●
●	●	●
●		
●	●	
●	●	●
●	●	●
5	5	3
●	●	●
●	●	●
●	●	●

Technology that's in sync with life.

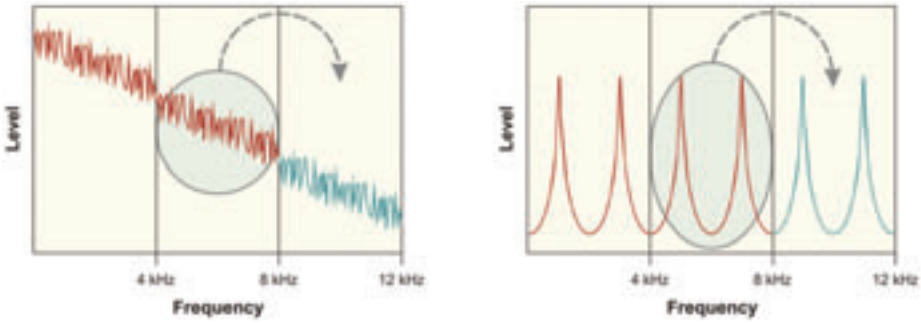
Life's smart technology makes hearing effortless and enjoyable in virtually any environment. Ensuring sounds are rich and smooth, and conversations are clear – for a more natural, intuitive hearing experience. With our optional Tek wireless enhancement, wearers can even stream audio from their favorite devices right to their Life instruments. Doesn't that sound great?

Hear better with natural sound technology.

Strike the right balance. Some wearers are bothered by sounds that are uncomfortably loud. Life's **AGC-I** and new multi-channel **AGC-O** systems work together to help balance wearers' perceptions of soft, average, and loud sounds, ensuring that sounds are audible and recognizable without being too loud. For optimal flexibility, Life 700 is equipped with a 16-channel compression system, Life 500 features 12 channels, and Life 300 has 8 channels.

Hit the high notes. Life sounds richer, fuller, and more natural than ever with **SoundBrilliance**. It analyzes the instrument's input signals and adds high frequencies when appropriate. This feature is particularly useful when sound signals are wirelessly transmitted. For example, Bluetooth® transmission is bandlimited to 7.5 kHz, but SoundBrilliance adds frequencies up to 12 kHz for a much fuller sound, especially when listening to music.

Principle of bandwidth extension with SoundBrilliance

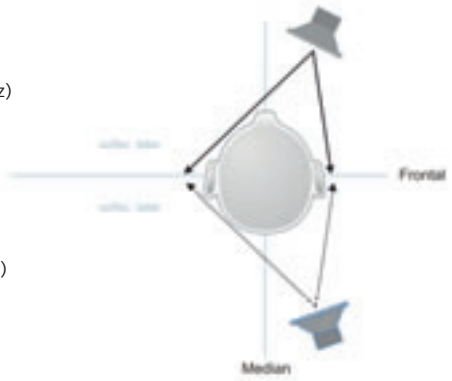


Bandlimited signal in red, extended signal in green.

Advanced localization technology

Left-right discrimination
binaural cues (ILD > 2 kHz, ITD < 1.5 kHz)

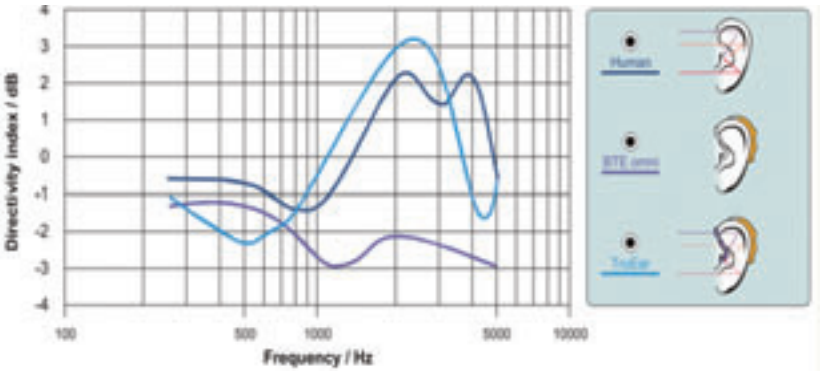
Front-back discrimination
monaural spectral cues
(> 2 kHz, outer ear reflections or TruEar)



Localization: different cues used for left-right and front-back discrimination.

Know where sound comes from. Localization of sounds can be a big challenge – especially with traditional BTE instruments, which reduce directionality at frequencies above 1.5 kHz compared to the unaided ear. Life lets your customers enjoy the reliability of a BTE without compromising directivity. Our breakthrough **TruEar** technology simulates natural acoustics, restoring the directivity of the human outer ear and improving front-back localization. And our **e2e wireless 2.0*** technology synchronizes the instruments' settings for better localization in every direction. Studies have shown that this technology can improve the left-right localization of sounds by up to 40%.[1]

How TruEar aids in front-back localization



* e2e wireless 2.0 utilizes a transmission frequency of 3.28 MHz, selected in accordance with the International Telecommunication Union (ITU) recommended frequency band 3.155 MHz to 3.400 MHz for wireless hearing instruments.

[1] Keidser, G., Rohrseitz, K., Dillon, H., Hamacher, V., Carter, L., Rass, U., Convery, E. (2006). "The effect of multi-channel wide dynamic range compression, noise reduction, and directional microphone on horizontal localisation performance in hearing aid wearers." *International Journal of Audiology,* 45: 563–579.

Greatly improve sound comfort.

Keep background noise where it belongs. One of the biggest challenges for wearers is distinguishing speech from background noise. Life's advanced **Speech and Noise Management** technology automatically identifies and reduces background noise to a comfortable level, while isolating and enhancing speech.

Soften sharp noises. Unexpected noises like the sounds of breaking glass, rustling paper, and clanging dishes can be annoying and disturbing. Not anymore. **SoundSmoothing**™ automatically isolates and softens sudden noises while leaving the speech signal intact. It's the industry's most effective technology for reducing transient noises, thanks to its degree of attenuation and adaptive temporal behavior.[1]

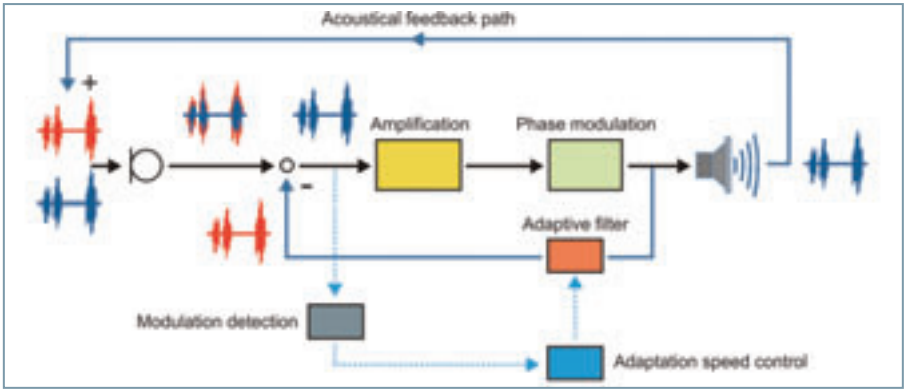
Enjoy a breath of fresh air. Now wearers can enjoy the breeze at the beach or play golf on a blustery day without having to remove their hearing instruments. Life's advanced **eWindscreen**™ feature constantly analyzes incoming signals to detect wind noise, then automatically adjusts signal processing to reduce it.

Converse with confidence. It's often difficult for wearers to follow a conversation when they're hearing the "buzz" of all the others around them in a busy restaurant or crowded room. Life's **Automatic Directional Microphone Systems** transition automatically between omni, TruEar and directional modes to improve speech intelligibility in difficult listening environments.

Rise above the noise. Life ensures that its acoustical signals for manual changes are audible even in very loud environments with **Adaptive Melody Beeps**. The volume levels of these signals are adjusted automatically to ensure that they are clearly heard above the ambient noise level. This helps increase customer wearing time and hearing instrument acceptance.

Don't get caught whistling. Our new **FeedbackBlocker** technology is the next generation of adaptive phase cancellation systems. Using Siemens' patented Acoustic Fingerprint Technology, Life applies phase modulation to the hearing instrument's output signal, detecting the feedback portion within the microphone signal and reducing or eliminating it. This ensures that feedback is suppressed much faster and more reliably than ever before.

Block diagram of FeedbackBlocker with AFT



[1] Chalupper, J. and Branda, E., "Comparison of Transient Noise Reduction Systems," *Hearing Review*, January 2008, 20–25.

Minimize adjustments with learning technology.

Fit wearers for the real world. Life 700 is equipped with **SoundLearning**, a sophisticated learning algorithm that helps bridge the gap between initial fittings, which happen in a controlled environment, and the real world. It learns the wearer's preferred loudness settings and adjusts settings for volume, compression, and frequency shape automatically. This minimizes the need for manual adjustments and provides a more customized fitting.

End manual adjustments. Life learns the wearer's volume preferences for each program and automatically adjusts the instruments to these preferences using **DataLearning** technology. It's so effective, it virtually eliminates the need for volume control changes within a short period of time.

Learn wearer preferences. Life records useful information like program usage and microphone modes with **Data Logging**. It gives you the data you need to fine-tune the instrument to the wearer's preferences, provide more effective counseling and, ultimately, help reduce the number of office visits.

Data Logging at a glance

TEK

Tek Connect Remote.

Connect to your favorite things – now also to Life 300!

Enjoy true stereo sound. Available with Life 700, 500 and 300, our **Tek wireless enhancement system** streams sound from wearers' mobile phones, telephones, MP3 players, televisions, and other audio sources directly to their Life instruments. Putting stereo sound right in their ears and allowing them to connect with their devices like never before – whether they want to hear the TV without disturbing others or answer their Bluetooth-enabled mobile phone with the press of a button.

It all happens through our **Tek Connect remote.** Equipped with Siemens proprietary Bluetooth technology, the Tek Connect remote ensures the most effective streaming functionality available without distortion or audible delay. It also gives wearers direct, one-touch access to listening programs as well as volume and treble controls, replacing their regular remote. Tek is all wearers need to enjoy a listening experience that's completely in sync. For further details about Tek, please see the Siemens Tek brochure "Audiologist and Hearing Care Professional Information."

Beating tinnitus

With Siemens Life, wearers can do both – triumph over tinnitus and improve their hearing. The ultra-thin LifeTube fitting concept allows an immediate solution for the tinnitus patient.

Life diverts the attention away from the disturbing sounds in the ear and makes it easier to listen to “outside” sounds again instead of permanently concentrating on those annoying “inside” sounds. This is achieved by using a broadband noise signal with a sound level just below that of the subjectively perceived tinnitus level.
Technology cannot eliminate Tinnitus but it helps to reduce mental stress which makes it difficult for many people to even sleep or work.

By using our slim ePen or ProPocket remote controls, Siemens Life can be changed from a hearing instrument to a tinnitus control device and vice versa.

ePen or ProPocket remote controls

Siemens Life as a tinnitus control device. When using Life as a tinnitus control instrument, the hearing care professional can shape the therapy signal, e.g. with a 16-channel equalizer for Life 700, a 12-channel equalizer for Life 500 and an 8-channel equalizer for Life 300. It is possible for the wearers to adjust the volume themselves in accordance to their individual preferences. This can be carried out using one of the remote controls.

Siemens Life – Two in one. When using Life as a hearing instrument and a tinnitus control instrument simultaneously, the shape of the tinnitus therapy signal is fixed to a broadband noise. The hearing care professional can set the volume of this signal according to the needs of the wearer.

Tinnitus accompanied by hyperacusis. When environmental sounds become “painfully loud,” known as hyperacusis, the output of Siemens Life can be precisely adjusted to the individual requirements due to the multichannel AGC-O. This is always applicable when the hearing instrument functionality is used.

CONNEXX LINK™

Optional Wireless Programming Device
(available at the end of 2009)

Fast, wireless, and precise fitting.

Life is easily fit using the latest Siemens Connexx fitting software. Connexx 6.2 combines the ultimate in fitting flexibility with new intuitive and user-friendly features, resulting in a fast and precise fitting for each wearer. Connexx 6.2 features ConnexxFit™, a new fitting strategy to combine the benefits of scientifically proven fitting formulas like NAL-NL1 and DSL m[i/o] with device-specific knowledge. It automatically selects the optimum fitting formula depending on the hearing loss and applies modifications to account for the instrument's acoustics and selected coupling method. And with ConnexxLink™, the optional wireless programming device, you can fit your customers wirelessly without cumbersome connections and tangled programming cables.

Life 700 Connexx settings.

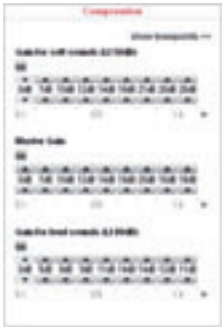
Frequency Shaping

Adjust the frequency in up to 16 independent channels.

Choose between "Broadband" Setting for maximum power output or set frequency-dependent maximum levels.

Sound Management

Choose from 7 Speech and Noise Management settings, 3 SoundSmoothing settings, 3 SoundBrilliance settings, and manage other parameters such as FeedbackBlocker and eWindscreen.



Compression

Adjust gain settings for soft sounds, speech, and loud sounds for up to 16 channels.

Microphone/Bluetooth

Adjust localization and microphone settings.

Compression

Adjust the settings for compression kneepoints and ratios, and the temporal behavior of the compression system in up to 16 channels.

Instrument Settings

Customize the instrument with the alert tone options.
You can even select the melody beeps instead of default tones to indicate instrument status.

Click on the eyeglass icon to select the number of handles (16, 8, 4, 2, or 1) you'd like to see.

Click on "Show kneepoint" to switch to a different view.

Life 500 Connexx settings.

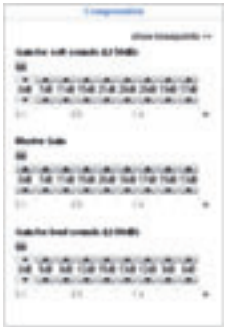
Frequency Shaping

Adjust the frequency in up to 12 independent channels.

Choose between "Broadband" Setting for maximum power output or set frequency-dependent maximum levels.

Sound Management

Choose from 5 Speech and Noise Management settings, 3 SoundSmoothing settings, and manage other parameters such as FeedbackBlocker and eWindscreen.



Compression

Adjust gain settings for soft sounds, speech, and loud sounds for up to 12 channels.

Microphone/Bluetooth

Adjust localization and microphone settings.

Compression

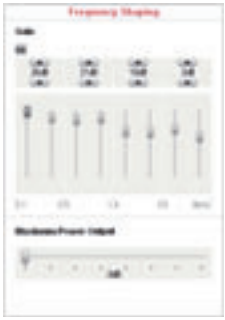
Adjust the settings for compression kneepoints and ratios, and the temporal behavior of the compression system in up to 12 channels.

Instrument Settings

Customize the instrument with the alert tone options. You can even select the melody beeps instead of default tones to indicate instrument status.

Click on the eyeglass icon to select the number of handles (16, 8, 4, 2, or 1) you'd like to see.

Click on "Show kneepoint" to switch to a different view.

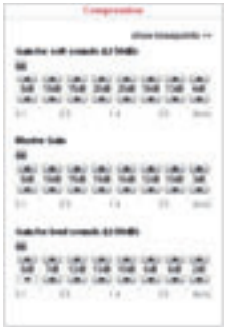
Life 300 Connexx settings.

Frequency Shaping

Adjust the frequency in up to 8 independent channels.

Choose setting for maximum power output.

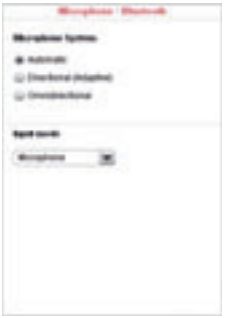
Sound Management

Choose from 3 Speech and Noise Management settings, a SoundSmoothing setting, and manage other parameters such as FeedbackBlocker and eWindscreen.



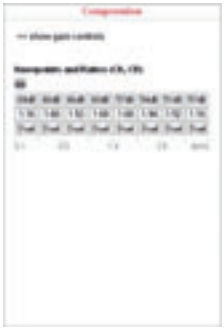
Compression

Adjust gain settings for soft sounds, speech, and loud sounds for up to 8 channels.



Microphone/Bluetooth

Adjust localization and microphone settings.



Compression

Adjust the settings for compression kneepoints and ratios, and the temporal behavior of the compression system in up to 8 channels.

Instrument Settings

Customize the instrument with the alert tone options. You can even select the melody beeps instead of default tones to indicate instrument status.

Click on the eyeglass icon to select the number of handles (16, 8, 4, 2, or 1) you'd like to see.

Click on "Show kneepoint" to switch to a different view.

Connexx settings

Three easy steps to set tinnitus functionality.

Step 1

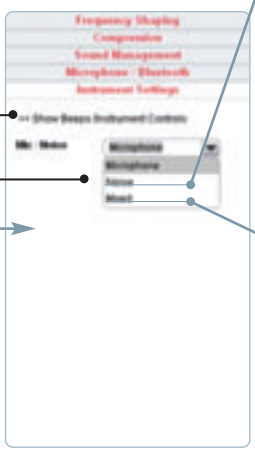
To access the tinnitus functionality in a dedicated program you have to click on "Show Tinnitus Masker" in the "Instrument Settings" Tab Card.

With the 5 hearing programs you can offer the full flexibility for your customer.

E.g.
Program 1: Hearing instrument functionality
Program 2: Noiser
Program 3: Mixed mode

Step 2

By clicking on this text you can switch back to the hearing instrument settings.



Under Mic/Noise you can select one of the following modes:

Microphone: This is the normal hearing instrument mode.

Noise: In this mode Life works as a noiser only.

Mixed: In this mode Life works as a hearing instrument and at the same time a noise is presented.

Step 3

Noise: Tinnitus therapy signal

By clicking on this text you can switch back to the hearing instrument settings.

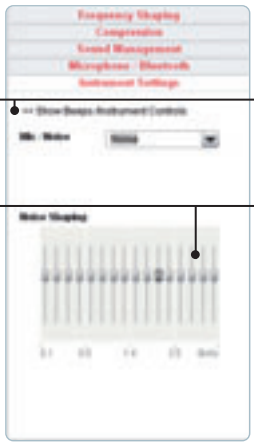
Whether with the 16-, 12- or 8-channel equalizer, the tinnitus therapy signal can be adjusted to the individual preferences of the wearer.

Mixed: hearing instrument functionality and tinnitus therapy signal

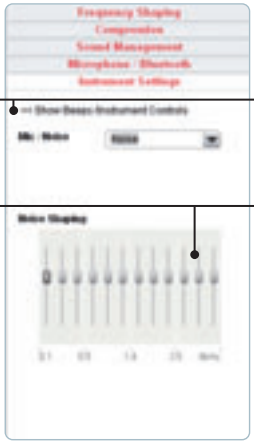
By clicking on this text you can switch back to the hearing instrument settings.

With this slider the volume of the tinnitus therapy signal can be adjusted to the individual preferences of the wearer.

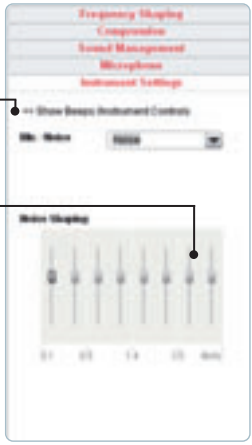
Life 700 (16-channel)



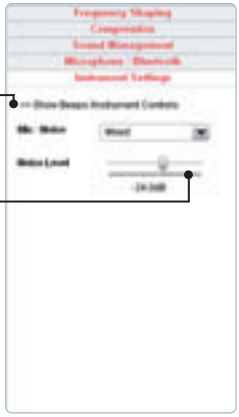
Life 500 (12-channel)



Life 300 (8-channel)



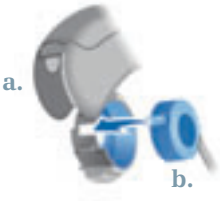
Life 700, Life 500, Life 300



How to connect programming cables.

You can connect Life to your programming station in a snap with this simple 3-step process.

1. Open the battery compartment.



2a. Insert the "battery pill" in the battery compartment. On the positive side you will see the attached programming strip.

2b. You will see a groove on the battery door which is the width of the programming connection strip. Position the pill so the strip fits exactly in this groove.

3. Close the battery compartment so that the programming strip extends outside.

Exchanging the microphone cover.

In just 3 simple steps, you can change the microphone cover to match the housing.

1. Remove the LifeTube. Place a small screwdriver under the microphone cover, as shown in the illustration.

2. Carefully lift the microphone cover until it detaches from the housing.

3. Carefully click the new microphone cover into place.

Exchanging the housing.

With Life, changing the housing is a breeze. All it takes is 3 easy steps.

1. Remove the LifeTube. Carefully remove the microphone cover as shown above.

2. Use the removal tool to push out the two pins on the instrument housing.

3. Carefully remove the battery door and the bottom shell of the housing. Carefully attach first the new bottom shell of the housing, then the new battery door. Push the two pins back into the housing and click the microphone cover into place. Attach the LifeTube.

Differentiating left and right instruments.

It's easy to mark each instrument so your customer knows which goes in the left ear and which goes in the right.

1. Find the white identification mark in the battery compartment. Press down on the middle to push it out.

2. Insert a red (right) or blue (left) mark in its place, as shown.

Instruments

Colors	Life 700	Life 500	Life 300
Beige	10302943	10417143	10417584
Granite	10302960	10417148	10417591
Grey	10302961	10417149	10417592
Brown	10302956	10417145	10417588
Black	10302955	10417144	10417585
Silver Metallic	10302965	10417152	10417597
Pearl White	10302963	10417150	10417595
Golden Blonde	10302959	10417147	10417590
Sandy Brown	10302964	10417151	10417596
Chestnut	10302958	10417146	10417589
Mod	10417472	10302804	10417587
Charming	10417473	10302805	10417593
Chic	10417474	10302807	10417598
Berry Charming	10417475	10302806	10417594
Fresh	10417476	10302808	10417599
Suave	10417477	10302803	10417586

16 colors including 10 natural hair colors and skin tones

Color Exchange Kits* (ROW)			Microphone Cover Exchange Kits
Life 700	**Life 500**	**Life 300**	**Life 700, 500 & 300**
10417222	10417218	10417539	10417230
10302779	10417499	10417546	10417668
10302780	10417500	10417547	10417669
10302776	10417496	10417543	10417665
10302773	10417493	10417540	10417663
10302785	10417505	10417552	10417673
10302783	10417503	10417550	10417671
10302778	10417498	10417545	10417667
10302784	10417504	10417551	10417672
10302777	10417497	10417544	10417666
10302775	10417495	10417542	10417673
10302781	10417501	10417548	10417673
10302786	10417506	10417553	10417664
10302782	10417502	10417549	10417664
10302787	10417507	10417554	10417670
10302774	10417494	10417541	10417670

* For people who have allergies we offer special titanium pins, see page 27.

LifeTubes

Type	Units	Part Number
1R	10	10296945
2R	10	10296947
3R	10	10296949
4R	10	10296951
5R	10	10296953
6R	10	10296955
1L	10	10296944
2L	10	10296946
3L	10	10296948
4L	10	10296950
5L	10	10296952
6L	10	10296954
Earhook	1	08771037

LifeTips

Type	Size	Units	Part Number
Open	4 mm	10	10296987
Open	6 mm	10	10296988
Open	8 mm	10	10296989
Open	10 mm	10	10296990
Closed	8 mm	10	10296986
Double	8/10 mm	10	10296984
Double	10/12 mm	10	10296985

Battery

	Size	Units	Part Number
Battery	312	6 Pack	10297393

Accessories

Item	Part Number
LifeTube Fitting Set	10296968
Programming Adapters	10175299
Titanium Pin Set	10422380

Hardware

Item	Part Number
ePen Standard	10417242
ePen Alternative Wireless Address	10417243
ProPocket Standard	10417240
ProPocket Alternative Wireless Address	10417823
Tek Connect Complete Set	10417268
Tek Connect Programming Cable	10417279
ConnexxLink Complete Set	10417277

Software

Item	Part Number
eARena Auditory Training Program	NISC 10297234 PAL 10297233

*For color exchange kit and microphone cover exchange kit, please see page 25.

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The information in this document contains general descriptions of the technical options available, which do not always have to be present in individual cases and are subject to change without prior notice.
The required features should therefore be specified in each individual case at the time of conclusion of the respective contract.

Legal Manufacturer

Siemens Audiologische Technik GmbH
Gebbertstrasse 125
DE-91058 Erlangen
Germany

Global Business Unit

Siemens Audiologische Technik GmbH
Gebbertstrasse 125
DE-91058 Erlangen
Germany
Phone: +49 9131 308 0

Global Siemens Headquarters

Siemens AG
Wittelsbacherplatz 2
80333 Muenchen
Germany

Global Siemens Healthcare Headquarters

Siemens AG
Healthcare Sector
Henkestrasse 127
91052 Erlangen
Germany
Phone: +49 9131 84 0
www.siemens.com/healthcare

www.siemens.com/hearing

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The required features should therefore be specified in each individual case at the time of conclusion of the respective contract.

Local Contact Information

Siemens contact
House number and street name
City and postal code
Country
Telephone: +XX-XXX-XXX-XXXX
www.XXXXXXXXXXXXX

Legal Manufacturer

Siemens Audiologische Technik GmbH
Gebbertstrasse 125
DE-91058 Erlangen
Germany

Global Business Unit

Siemens Audiologische Technik GmbH
Gebbertstrasse 125
DE-91058 Erlangen
Germany
Phone: +49 9131 308 0

Global Siemens Headquarters

Siemens AG
Wittelsbacherplatz 2
80333 Muenchen
Germany

Global Siemens Healthcare Headquarters

Siemens AG
Healthcare Sector
Henkestrasse 127
91052 Erlangen
Germany
Phone: +49 9131 84 0
www.siemens.com/healthcare

www.siemens.com/hearing

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